

Appl. No. 10/695,813
Amendment dated: January 24, 2008
Reply to OA of: August 28, 2007

REMARKS

Reconsideration of the present patent application is respectfully requested in view of the following remarks.

I. Amendments to Claims and Specification

Claim 1 has been amended to include the limitations of original claims 2 and 3, namely that the reference voltages are obtained by performing digital-to-analog conversion of the data output by the sample/latch circuits. In addition, the claims and specification have been amended to change “coded” data to the more idiomatically accurate —encoded— data.

The amendments are clearly supported by Fig. 2 and the corresponding description in lines 10-16 on page 4 of the original specification, which describe the sample/latch units 221-223 that “transmit the encoded data to corresponding digital —to-analog converters through corresponding control signal lines 231,232.” Further support is found in page 4, lines 18-21 of the of the original specification, which state that the plurality of “digital-to-analog converters receives the encoded values and converts the same from digital to analog to thus generates a plurality of reference voltages, each corresponding to Gamma curve of a primary color.”

II. Response to Rejections Under 35 U.S.C. § 102

The rejection of claims 1, 2, 3, 4 and 7 under 35 U.S.C. § 102 (e) as being anticipated by the U.S. Patent Publication No. 2003/0085859 (Lee et al.). is respectfully traversed on the grounds that the Lee publication fails to disclose or

suggest a driving circuit, as recited in claim 1, in which:

- The coding unit of the driving circuit generates a plurality of encoded data according to a plurality of characteristic curves at the same time, wherein the plurality of characteristic curves are Gamma curves respectively for three primary colors R, G, and B; and
- The three “separate and regulable” Gamma reference voltages are generated in real time by performing digital-to-analog conversion of encoded data as they are supplied to a plurality of sample/latch circuits.

According to the invention, no storing process is executed during generation of the three Gamma reference voltages. As a result, no “storage device”, such as a register for storing the encoded data, is required

As shown in the aforesaid listings of claims, the applicant has further amended claim 1 of the present application, to recite that the “reference voltage generator” of the claimed driving circuit comprising “a plurality of sample/latch circuits” and “a plurality of digital-to-analog converters.” As explained on page 4, lines 10-13 of the specification of the present application, the plurality of sample/latch circuit receives the encoded data generated by the coding units, sample/latch the encoded data, and transmits the encoded data to the corresponding digital-to-analog converters through the control signal lines. IN addition, as described on page 4, lines 18-21 of the specification of the present application, the plurality of “digital-to-analog converters receives the encoded values and converts the same from digital to analog to thus generates a plurality of reference voltages, each corresponding to Gamma curve of a primary color.

In contrast, as described from paragraph [0026], line 13 to paragraph [0027], line 5 of the specification of the Lee patent, the gamma register 100 receives the

Appl. No. 10/695,813
Amendment dated: January 24, 2008
Reply to OA of: August 28, 2007

digital gamma data through a plurality of data buses from a timing controller (not shown) and stores the digital gamma data in response to the gamma load signal GMA_load, as shown in FIG. 2 of the Lee patent. That is, the gamma register 100 stores the digital gamma data. Therefore, the gamma register 100 does not sample/latch the encoded data (gamma data) during the generation of the reference voltages (gamma reference voltages). As a result, the "reference voltage generator" of the present application is different from the "data drivers" of the Lee patent.

Moreover, the coding unit of the present application is not a "time controller", since the coding unit of the present application generates a plurality of encoded data according to a plurality of characteristic curves (Gamma curves respectively for three primary colors R, G, B). In fact, the coding unit and the reference voltage generator are independent from the ordinary driving circuit, such as the timing controller and the related circuits of the driving circuit of an LCD device.

As a result, in view of the foregoing amendment to claim 1, the driving circuit of claim 1 of the present patent application is different from the driving circuit of the cited Lee patent, and withdrawal of the rejection of claim 1 based on the Lee patent is respectfully requested. The other claims are directly or indirectly dependent on claim 1, and thus are distinguished from the prior art by the same reason.

II. Response to Rejections Under 35 U.S.C. § 103

The Examiner indicates that claim 5 of the present patent application is rejected under 35 U.S.C. § 103(a) as being unpatentable over US Laid Open No. 2003/0085859 (Lee et al.).

This rejection has been rendered moot by the cancellation of claim 5.

Appl. No. 10/695,813
Amendment dated: January 24, 2008
Reply to OA of: August 28, 2007

CONCLUSION

In view of the foregoing remarks, reconsideration and allowance of the application are now believed to be in order, and such action is hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

BACON & THOMAS, PLLC

A handwritten signature in dark ink, appearing to be 'B. Urcia', followed by a long horizontal line extending to the right.

By: BENJAMIN E. URCIA
Registration No. 33,805

Date: January 24, 2008

BACON & THOMAS, PLLC
625 Slaters Lane, 4th Floor
Alexandria, Virginia 22314

Telephone: (703) 683-0500